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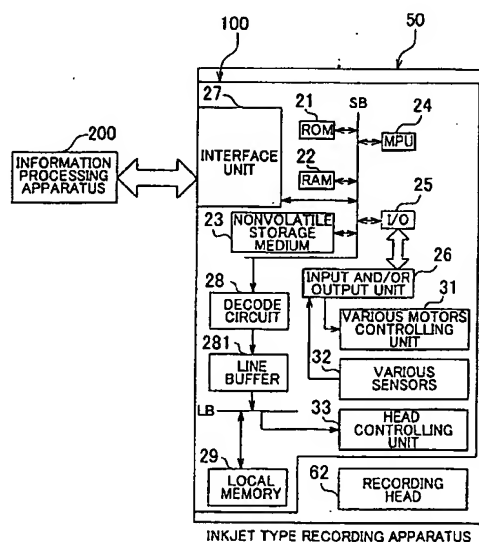
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(54) A data transferring apparatus for transferring liquid ejection data and a liquid ejecting apparatus

(57) A data transferring apparatus for transferring liquid ejection data, has a decode unit having a decode circuit, which can perform hardware development on liquid ejection data, a line buffer for storing the liquid ejection data developed by word unit and a compressed data inputting unit for transferring the liquid ejection data from an external part to the decode circuit, wherein the line buffer comprises two faces of buffer areas in order to store the developed data, the developed liquid ejection data is sequentially stored in a first face of the buffer areas, while the developed liquid ejection data is sequentially stored in a second face of the buffer areas when the developed data of predetermined words has been accumulated, and the developed liquid ejection data is stored in a first face one word each, while the liquid ejection data already developed in a second face is simultaneously transferred to an external memory one word each.

FIG. 3



EP 1 507 213 A3



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EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|--|--|--|--|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.7) |
| X | EP 0 802 503 A (BROTHER KOGYO KABUSHIKI KAISHA) 22 October 1997 (1997-10-22) * column 10, lines 4-30 * * column 12, line 36 - column 13, line 9 * * column 14, line 53 * * column 17, line 1 - line 4 * * column 17, line 30 - line 37 * * column 19, line 18 - line 22 * ----- | 1-5 | G06F13/28 G06K15/10 |
| X | US 4 918 624 A (MOORE ET AL) 17 April 1990 (1990-04-17) * figure 3 * * column 4, line 10 - line 29 * * column 6, line 34 - line 55 * ----- | 1-5 | |
| A | US 4 520 455 A (CREAN ET AL) 28 May 1985 (1985-05-28) * abstract * * figures 4,5 * * column 6, line 14 - line 20 * * column 6, line 55 - line 62 * * column 7, line 41 - line 59 * * column 8, line 17 - line 39 * ----- | 1-5 | |
| A | US 5 884 050 A (WHEELER ET AL) 16 March 1999 (1999-03-16) * figure 2 * * column 7, line 33 - line 65 * ----- | 1-5 | |
| The present search report has been drawn up for all claims | | | TECHNICAL FIELDS SEARCHED (Int.Cl.7) G06F G06K |
| Place of search Munich | | Date of completion of the search 24 June 2005 | Examiner Albert, J |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | | | |

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ON EUROPEAN PATENT APPLICATION NO.**

EP 03 01 8741

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24-06-2005

| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
|---|---|---------------------|------|----------------------------|--|---------------------|
| EP 0802503 | A | 22-10-1997 | JP | 9277572 A | | 28-10-1997 |
| | | | JP | 9290520 A | | 11-11-1997 |
| | | | DE | 69730462 D1 | | 07-10-2004 |
| | | | EP | 0802503 A2 | | 22-10-1997 |
| | | | US | 5937152 A | | 10-08-1999 |
| ----- | | | | | | |
| US 4918624 | A | 17-04-1990 | NONE | | | |
| ----- | | | | | | |
| US 4520455 | A | 28-05-1985 | US | 4476542 A | | 09-10-1984 |
| | | | GB | 2119982 A ,B | | 23-11-1983 |
| | | | JP | 1731246 C | | 29-01-1993 |
| | | | JP | 4017459 B | | 26-03-1992 |
| | | | JP | 58213388 A | | 12-12-1983 |
| ----- | | | | | | |
| US 5884050 | A | 16-03-1999 | US | 5968153 A | | 19-10-1999 |
| ----- | | | | | | |

EPO FORM P0450

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82